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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 August 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The **following** is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

> 1. Determining the scope and contents of the prior art.
> 2. Ascertaining the differences between the prior art and the claims at issue.
> 3. Resolving the level of ordinary skill in the pertinent art.
> 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1.   **Claims 1-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Elliott et al (US 20040022237, hereinafter **Elliott**) in view of H. Schulzrinne et al. IETF

RFC 3550 "RTP: A Transport Protocol for Real-Time Applications", July 2003

(hereinafter **RFC 3550**).

For **claim 1**, Elliott discloses a method, comprising the steps of:

(a) obtaining information (packet loss, [1493], line 4 and Fig. 21B) relevant to the

quality of service of voice calls being transmitted from a first location (102 of FIG. 21B)

to a second location (130 of FIG. 21B) via an IP network (112 of FIG. 21B);

(b) a parameter (Packet Loss Threshold, Table 147 – continued, page 85) based

on said information; and

(c) accepting a new call into the IP network in the case of said parameter not exceeding an upper threshold.

Elliott is silent on calculating Packet Loss Threshold (the parameter in b).

In the same field of endeavor, RFC 3550 discloses calculating the packet loss threshold (packet loss ratio, line 1-11 of the last paragraph of page 43).

One skilled in the art would apply the calculating the parameter taught by RFC 3550 into Elliott to accept a new call packet if data loss threshold does not exceed an upper threshold to ensure the network is not heavily congested.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Elliott with RFC 3550 to ensure a new call is set up properly.

As to **claim 2**, Elliott and RFC 3550 disclose the method of claim 1, but are silent on wherein said new call may be accepted at a reduced bandwidth in the case of said parameter exceeding a lower threshold.

However, it is the common knowledge that if network in a "mild" congestion state, as indicated by the value packet loss ratio exceeding a lower threshold but below a upper threshold, a reduce call should be accepted if doing so would not significantly worsen the congestion.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to accept a new call at a reduced bandwidth in order to fully take advantage of network resource.

As to **claim 3**, Elliott and RFC 3550 disclose the method of claim 1, but are silent on where said new call is not accepted into the IP network in the case of said parameter exceeding the upper threshold.

However, Elliott indicates that when data loss threshold is reached, packet loss is unacceptable for normal network operation (unacceptable packet loss, [1493], line 4 and Fig. 21B). In this situation, it is common sense not to accept a new call.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention not to accept a new call network in the case of said parameter exceeding the upper threshold in order not to make network congestion worsen.

As to **claim 4**, Elliott and RFC 3550 disclose the method of claim 1, RFC 3550 further discloses wherein the information obtained is a number of send packets (Line 1 of the paragraph for "Sequence number: 16 bits", Page 14, where lost packets are those with missing sequence number), wherein the number of sent packets comprises a number of lost packets, a number of late packets_(Line 1 of the paragraph for "Sequence number: 16 bits", Page 14, where late packets inherently are packets that have been sent, but have not been received according to their sequence numbers) and a number of received packets.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Elliott with RFC 3550 to get detailed information regarding network operation.

As to **claim 5**, Elliott and RFC 3550 disclose the method of claim 1, Elliott further discloses wherein the information obtained is a delay (unacceptable latency, [1493], line

4) of received packets transmitted from said first location to said second location in the IP network.

As to **claim 6**, Elliott and RFC 3550 disclose the method of claim 1, RFC 3550 further discloses wherein the information obtained is a delay variation (variation in the delay, Line 5 of last paragraph in Page 44) of received packets transmitted from said first location to said second location in the IP network.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Elliott with RFC 3550 to get detailed information regarding network operation.

As to **claim 7**, Elliott and RFC 3550 disclose the method of claim 1, RFC 3550 further discloses wherein the information is obtained on a periodic basis (periodic transmission of control packets, first paragraph in Page 19).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Elliott with RFC 3550 to get detailed information regarding network operation.

As to **claim 8**, Elliott and RFC 3550 disclose the method of claim 1, RFC 3550 further discloses wherein the information is obtained on an exception basis using an immediate report (Receiver report, first line of Section 6.4 in Page 35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Elliott with RFC 3550 to get detailed information regarding network operation.

As to **claim 9**, Elliott and RFC 3550 disclose the method of claim 1, RFC 3550

further discloses wherein the parameter include packet lost ratio (packet lost ratio, Line

1 of 3rd paragraph of Section 6.4.4, Page 43).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to combine Elliott with RFC 3550 to get detailed information

regarding network operation.

As to **claim 10**, Elliott and RFC 3550 disclose the method of claim 1, but are

silent on wherein PLR is defined as

$$PLR = \frac{(\text{lost packets} + \text{late packets})}{(\text{received packets} + \text{lost packets} + \text{late packets})}.$$

However, it is well known to any person with ordinary skill in the art that the

definition of the PLR is a ratio of the number of packets NOT received to the total

number of packets sent for a given period of time; and the number of packets that are

not received equal to the sum of the number of lost packets and the number of late

packets;

therefore, it would have been obvious to a person of ordinary skill in the art at the

time of the invention to calculate PLR using formula shown above for gaining a better

understanding of network performance status.

As to **claim 11**, Elliott and RFC 3550 disclose the method of claim 2, Elliott

further discloses using different encoders (CODECs, such as ones supporting G.711, G.

726, and G.728 in [1004]) to handle different connections with different bandwidth

([1004]); which include the case of using 2 different encoders to handle 2 different kinds of calls that have different bandwidth.

As to **claim 12**, Elliott and RFC 3550 disclose the method of claim 2, but are **silent on** wherein the bandwidth of a newly accepted call is reduced by increasing the packet size for said newly accepted voice call;

however, for a given amount of data, increasing the packet size will decrease the overhead caused by packet header therefore reduce the required bandwidth for the call;

therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to increase the packet size so as to decrease the required bandwidth for the call for the benefit of saving bandwidth resource.

As to **claim 13**, Elliott and RFC 3550 disclose the method of claim 2, Elliott disclose further discloses wherein the bandwidth of a newly accepted call is reduced by activating the characteristic of silence suppression for said newly accepted voice call (silence suppression activation timer, table 147 in Page 85).

2.   Claims **14-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott et al (US 20040022237, hereinafter **Elliott**).

For **claim 14**, Elliott discloses an apparatus comprising a gateway (Soft Switch 204, FIG. 2B) for interfacing voice call data from a public switch telephone network to an Internet protocol network; said gateway further comprising:

a first circuit (Ethernet switch 332 of FIG. 3 [0568]) for passing said voice call data to the internet protocol network;

a second circuit (CPU card of Soft Switch 204, FIG. 2B) or polling the internet

protocol network about traffic information transmitted therein; and

Elliott does not explicitly disclose a third circuit for processing the polled

information to determine whether the voice call data is to be accepted by the internet

protocol network.

However, the CPU (of Soft Switch 204, FIG. 2B) can be used for processing the

polled information to determine whether the voice call data is to be accepted by the

internet protocol network, therefore, is equivalent to the third circuit for processing the

polled information.

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the invention to use the CPU as the third circuit for processing the polled

information to determine whether the voice call data is to be accepted by the internet

protocol network to track the network operation information.

As to **claim 15**, Elliott discloses the apparatus of claim 14 wherein said first

circuit further comprises one or more Ethernet cards (Ethernet switch 332/334 of FIG. 3

[0568]) that are connected to the Internet protocol network.

As to **claim 16**, Elliott discloses the apparatus of claim 14 wherein said second

circuit is at least one strongarm card (CPU card of Soft Switch 204, FIG. 2B).

As to **claim 17**, Elliott discloses the apparatus of claim 16 wherein the strongarm

card (CPU card of Soft Switch 204, FIG. 2B) is connected to the Ethernet card via a

host CPU circuit.

As to **claim 18**, Elliott discloses the apparatus of claim 14 wherein the third circuit

(CPU of Soft Switch 204, FIG. 2B) compares a parameter based on the polled

information to a plurality of thresholds.

As to **claim 19**, Elliott discloses the method of claim 18, but is silent on wherein

PLR is defined as

$$PLR = \frac{(\text{lost packets} + \text{late packets})}{(\text{received packets} + \text{lost packets} + \text{late packets})}.$$

However, it is well known to any person with ordinary skill in the art that the

definition of the PLR is a ratio of the number of packets NOT received to the total

number of packets sent for a given period of time; and the number of packets that are

not received equal to the sum of the number of lost packets and the number of late

packets;

therefore, it would have been obvious to a person of ordinary skill in the art at the

time of the invention to calculate PLR using formula shown above for gaining a better

understanding of network performance status.

As to **claim 20**, Elliott discloses the apparatus of claim 19 wherein the traffic

processing (including new call setup) depends on QoS parameters, including packet

loss performance ([1081]);

Elliott is **silent on** explicitly discloses a new call is accepted if PRL is below a

given threshold;

however, PRL is just one commonly used QoS parameter;

therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to a new call is accepted if PRL that is (calculated by the third circuit, CPU) is below a given threshold for the benefit of providing reliable network service for users.

As to **claim 21**, Elliott discloses the apparatus of claim 19 wherein the third circuit compares the packet loss ratio;

Elliott is **silent on** explicitly discloses a new call is accepted using a reduced bandwidth if PRL is between given low threshold and the upper threshold;

however, PRL is commonly used QoS parameter ([1081]); and Elliott also teaches providing different network services depend on QoS parameters, such as delay and packet loss information ([1088]);

therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to a new call is accepted using a reduced bandwidth if PRL that is (calculated by the third circuit, CPU) is between given low threshold and the upper threshold for the benefit of providing reliable network service for users.

As to **claim 22**, Elliott discloses the apparatus of claim 19 wherein the third circuit compares the packet loss ratio;

Elliott is **silent on** explicitly discloses a new call is accepted if PRL is below a given threshold;

however, PRL is commonly used QoS parameter ([1081]);

therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to a new call is blocked if PRL that is (calculated by the third circuit,

CPU) is above the upper threshold for the benefit of protecting normal network operation.

Response to Amendments/Arguments

Applicant's arguments filed on 8/9/2007 with respect to the rejection(s) of claims 1-9 under 35 U.S.C. 102(b), and claims 7-15 under 35 U.S.C. 102(e) are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianye Wu whose telephone number is (571)270-1665. The examiner can normally be reached on Monday to Thursday, 8am to 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a
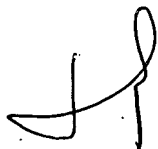
USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jianye Wu

9/30/07

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